Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (original) A dental matrix resin, comprising the mixture of:

(a) a dioxiranyl 1,5,7,11-tetraoxaspiro[5.5]undecane;

(b) a dioxirane; and

(c) an initiator capable of initiating cationic polymerization of said resin.

2. (original) The resin of claim 1, wherein said initiator is a photoinitiator.

3. (original) The resin of claim 2, wherein said photoinitiator is selected from the group consisting of (4-n-octyloxyphenyl)phenyliodonium hexafluoroantimonate, [4-(2-hydroxytetradecyloxyphenyl)]phenyliodonium hexafluoroantimonate, [4-1-methylethyl)phenyl](4-methylphenyl)iodonium tetrakis(pentafluorophenyl)borate(1-), and combinations thereof.

4. (currently amended) The resin of claim 1, wherein said dioxiranyl ~~tetraoxspiro[5.5]undecane~~tetraoxaspiro[5.5]undecane is selected from the group consisting of ~~3,9-bis(cyclohex-3-enylmethyl)-1,5,7,11-tetraoxaspiro[5.5]undecane~~, 3,9-bis[(7-oxabicyclo[4.1.0]hept-3-yl)- methyl]-1,5,7,11-tetraoxaspiro[5.5]undecane, ~~3,9-bis[(6-methylcyclohex-3-e-nyl)methyl]-1,5,7,11-tetraoxaspiro[5.5]undecane~~, 3,9-bis[(4-methyl-7-oxabicyclo[4.1.0]hept-3-yl)methyl]-1,5,7,11-tetraoxaspiro[5.5]undecane, ~~3,9-bis(cyclohex-3-enylmethoxy)-1,5,7,11-tetraoxaspiro[5.5]undecane~~, 3,9-Bis[(7-oxabicyclo[4.1.0]hept-3-yl)methoxy]-1,5,7,11-tetraoxaspiro[5.5-]undecane, 3,9-bis[2-methyl-7-oxabicyclo[4.1.0]hept-3-

yl)methoxy]-1,5,7,11- tetraoxaspiro[5.5]undecane, 3,9-bis[(4-methyl-7-oxabicyclo[4.1.0]hept-3-y-l)methoxy]-1,5,7,11-tetraoxaspiro[5.5]undecane, ~~3,9-bis(cyclohex-3-enyloxy methyl)-1,5,7,11-tetraoxaspiro {5.5}undecane~~, 3,9-bis[7-oxabicyclo[4.1.0]hept-3-yl)oxymethyl]-1,5,7,11-tetraoxaspiro[5.5]undecane, ~~3,9-bis[(6-methylcyclohex-3-enyl)oxymethyl-1,5,7,11-tetraoxaspiro[5.5]undecane~~, 3,9-bis[(4-methyl-7-oxabiclo[4.1.0]hept-3-yl)oxymethyl]-1,5,7,11-tetraoxaspiro[5.5]undecane,~~[16] 8,10,19,20-tetraoxatrispiro[5.2.2.5.2.2]henicosa-2,14-diene~~, 7,26-dioxatrispiro[bicycle[4.1.0]heptane-3,5'-1,3-dioxane-2'2"-1,3-dioxane-5",4"'-bicyclo[4.1.0]heptane], and combinations thereof.

5. (original) The resin of claim 1, wherein said dioxirane is selected from the group consisting of diglycidyl ether bisphenol A, 3',4'-epoxycyclohehanemethyl-3,4-epoxcyclohexane carboxylate, bis(2,3-oxiranylcyclopentyl)ether, butanediol diglycidyl ether, bis(3,4-epoxycyclohexylmethyl)adipate, and combinations thereof.

6. (original) The resin of claim 1, further comprising:

a polyol.

7. (original) The resin of claim 6, wherein said polyol is selected from the group consisting of poly(tetrahydrofuran), 2-oxepanone polymer with 2-ethyl-2-(hydroxymethyl)-1,3-propane diol, and combinations thereof.

8. (original) The resin of claim 1, further comprising:

a photosensitizer.

9. (original) The resin of claim 8, wherein said photosensitizer is selected from the group consisting of camphorquinone, 2-chlorothioxanthen-9-one, and combinations thereof.

10. (original) The resin of claim 1, further comprising:

a reaction promoter.

11. (original) The resin of claim 10, wherein said reaction promoter is selected from the group consisting of ethyl p-dimethylaminobenzoate, 4,4'-bis(diethylamino)benzophenone, and combinations thereof.

12. (original) The resin of claim 1, wherein said resin comprises about 1-30 weight % of said dioxiranyl 1,5,7,11-tetraoxaspiro[5.5]undecane, about 70-99 weight % of said dioxirane, and about 0.1-10 weight % of said initiator.

13. (original) A dental restorative material, comprising the mixture of:

(a) a dioxiranyl 1,5,7,11-tetraoxaspiro[5.5]undecane;

(b) a dioxirane;

(c) an initiator capable of initiating cationic polymerization; and

(d) a dental filler that does not substantially interfere with cationic polymerization.

14. (original) A method of making a dioxiranyl 1,5,7,11-tetraoxaspiro[5.5]undecane, comprising:

providing an alkyl substituted unsaturated cyclohexenyl group bonded to a propane diol by a flexible linkage selected from the group consisting of alkylene, oxyalkylene, and alkyleneoxy linkages;

subjecting said alkyl substituted cyclo to transesterification with a tetra-alkyl-orthocarbonate to obtain an unsaturated 1,5,7,11-tetraoxaspiro[5.5]undecane; and

epoxidizing said unsaturated 1,5,7,11-tetraoxaspiro[5.5]undecane with an organic per-acid to obtain a 1,5,7,11-dioxiranyl tetraoxaspiro[5.5]undecane.

15. (canceled) The product of the method of claim 14.

16. (currently amended) A ~~dioxiranyl~~ 1,5,7,11-tetraoxaspiro[5,5]undecane selected from the group consisting of

3,9-bis(cyclohex-3-enylmethyl)-1,5,7,11-tetraoxaspiro[5.5]undecane,

3,9-bis[(7-oxabicyclo[4.1.0]hept-3-yl)methyl]-1,5,7,11-tetraoxaspiro[5.5]undecane,

3,9-bis[(6-methylcyclohex-3-enyl)methyl]-1,5,7,11-tetraoxaspiro[5.5]undecane,

3,9-bis[(4-methyl-7-oxabicyclo[4.1.0]hept-3-yl-)methyl]-1,5,7,11-tetraoxaspiro[5.5]undecane,

8,10,19,20-tetraoxatrispiro[5.2.2.5.2.2]henicosa-2,14-diene,

7,26-dioxatrispiro[bicycle[4.1.0]heptane-3,5'-1,3-dioxane-2'2"-1,3-dioxane-5",4'"-bicyclo[4.1.0]heptane], 3,9-bis(cyclohex-3-enylmethoxy)-1,5,7,11-tetraoxaspiro[5.5]undecane,

3,9-bis[(7-oxabicyclo[4.1.0]hept-3-yl)methoxy]-1,5,7,11-tetraoxaspiro[5.5]undecane,

3,9-bis[(6-methylcyclohex-3-eny- l)methoxy]-1,5,7,11-tetraoxaspiro[5,5]undecane

3,9-bis[2-methyl-7-oxabicyclo[4.1.0]hept-3-yl)methoxy]-1,5,7,11- tetraoxaspiro[5.5]undecane,

3,9-bis[(4-methyl-7-oxabicyclo[4.1.0]hept-3-y- l)methoxy]-1,5,7,11-tetraoxaspiro[5.5]undecane,

3,9-bis(cyclohex-3-enyloxy-methyl)-1,5,7,11-tetraoxaspiro[5.5]undecane, ~~and~~

3,9-bis[7-oxabicyclo[4.1.0]hept-3-yl)oxymethyl]-1,5,7,11-tetraoxaspiro[5.5]undecane,

3,9-bis[(6-methylcyclohex-3-en- yl)oxymethyl]-1,5,7,11-tetraoxaspiro[5,5]undecane; and

3,9-bis[(4-methyl-7-oxabicyclo-[4.1.0]hept-3-yl)oxymethyl]-1,5,7,11-tetraoxaspiro[5,5]undecane,

17. (new) A 1,5,7,11-tetraoxaspiro[5,5]undecane according to Claim 16 which is a dioxiranyl 1,5,7,11-tetraoxaspiro[5,5]undecane selected from the group consisting of

3,9-bis[(7-oxabicyclo[4.1.0]hept-3-yl)methyl]-1,5,7,11-tetraoxaspiro[5.5]undecane,

3,9-bis[(4-methyl-7-oxabicyclo[4.1.0]hept-3-yl-)methyl]-1,5,7,11-tetraoxaspiro[5.5]undecane,

3,9-bis[(7-oxabicyclo[4.1.0]hept-3-yl)methoxy]-1,5,7,11-tetraoxaspiro[5.5]undecane,

3,9-bis[(4-methyl-7-oxabicyclo[4.1.0]hept-3-y- l)methoxy]-1,5,7,11-tetraoxaspiro[5.5]undecane,

3,9-bis[7-oxabicyclo[4.1.0]hept-3-yl)oxymethyl]-1,5,7,11-tetraoxaspiro[5.5]undecane,

3,9-bis[(4-methyl-7-oxabicyclo-[4.1.0]hept-3-yl)oxymethyl]-1,5,7,11-tetraoxaspiro[5,5]undecane,

7,26-dioxatrispiro[bicycle[4.1.0]heptane-3,5'-1,3-dioxane-2'2"-1,3-dioxane-5",4'"-bicyclo[4.1.0]heptane], and

3,9-bis[2-methyl-7-oxabicyclo[4.1.0]hept-3-yl)methoxy]-1,5,7,11-tetraoxaspiro[5.5]undecane,

18. (new) A 1,5,7,11-tetraoxaspiro[5,5]undecane according to Claim 16 which is di-substituted selected from the group consisting of

3,9-bis(cyclohex-3-enylmethyl)-1,5,7,11-tetraoxaspiro[5.5]undecane,

3,9-bis[(7-oxabicyclo[4.1.0]hept-3-yl)methyl]-1,5,7,11-tetraoxaspiro[5.5]undecane,

3,9-bis[(6-methylcyclohex-3-enyl)methyl]-1,5,7,11-tetraoxaspiro[5.5]undecane,

3,9-bis[(4-methyl-7-oxabicyclo[4.1.0]hept-3-yl-)methyl]-1,5,7,11-tetraoxaspiro[5.5]undecane,

3,9-bis(cyclohex-3-enylmethoxy)-1,5,7,11-tetraoxaspiro[5.5]undecane,

3,9-bis[(7-oxabicyclo[4.1.0]hept-3-yl)methoxy]-1,5,7,11-tetraoxaspiro[5.5]undecane,

3,9-bis[(6-methylcyclohex-3-eny- l)methoxy]-1,5,7,11-tetraoxaspiro[5,5]undecane

3,9-bis[(4-methyl-7-oxabicyclo[4.1.0]hept-3-y- l)methoxy]-1,5,7,11-tetraoxaspiro[5.5]undecane,

3,9-bis(cyclohex-3-enyloxy-methyl)-1,5,7,11-tetraoxaspiro[5.5]undecane, ~~and~~

3,9-bis[7-oxabicyclo[4.1.0]hept-3-yl)oxymethyl]-1,5,7,11-tetraoxaspiro[5.5]undecane,

3,9-bis[(6-methylcyclohex-3-en- yl)oxymethyl]-1,5,7,11-tetraoxaspiro[5,5]undecane; and

3,9-bis[(4-methyl-7-oxabicyclo-[4.1.0]hept-3-yl)oxymethyl]-1,5,7,11-

tetraoxaspiro[5,5]undecane, and

3,9-bis[2-methyl-7-oxabicyclo[4.1.0]hept-3-yl)methoxy]-1,5,7,11- tetraoxaspiro[5.5]undecane.